

## New records of Psychodidae (Diptera) for Switzerland

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**New records of Psychodidae (Diptera) for Switzerland.** - New records are given for 35 species of moth flies. 11 of these are new to Switzerland. *Psychoda mycophila* Vaillant is synonymized with *Psychomora vanharai* Jezek (syn. nov.). The current Swiss list is considered to be well under half of the probable number of species present in the country.

**Keywords:** Diptera - Psychodidae - faunistics - new records - new synonymy - Switzerland.

### INTRODUCTION

The psychodid fauna of Switzerland is extremely poorly known, and the current checklist (Wagner, 1998) together with its first supplement (Merz *et al.*, 2001) lists only 68 species. In all probability the number is nearer 200 (see also Wagner, 1998). This family of small nondescript flies has become better understood in Europe in the last 30 years thanks to a number of useful monographs, but Switzerland has had no resident specialist, and European workers such as Wagner and Vaillant have seemingly had access to only scanty material from the country.

The present author has had the opportunity to study material collected in Vezia and Rochefort, using principally luminous Malaise traps (see also Dufour, 1986), and from the Sihlwald near Zürich, using various eelectors (Schiegg, 2001). This latter material should have been reported in Schiegg *et al.* (1999), but the data were not requested from the author, who remained unaware of their (incomplete) publication until now. A detailed list, including several species new to Switzerland, is now provided. Almost all of the material cited has been deposited in the Muséum d'histoire naturelle, Genève, to establish a basic slide collection with a view to improving the national coverage of this neglected family. A few specimens remain in the collection of the author. All specimens were determined by the author except where indicated.

The nomenclature follows that of the Catalogue of Palearctic Diptera (Wagner, 1990) incorporating recent corrections as detailed by Chandler (1998). In the absence of a universally agreed classification, genera and species are arranged alphabetically within subfamilies and tribes.

### ABBREVIATIONS FOR LOCALITIES:

- R     Rochefort (Canton Neuchâtel) 780 m, château, 551.350/201.750  
V     Vezia (Canton Ticino) 410 m, San Martino  
S     Sihlwald (Canton Zurich) (see Schiegg *et al.*, 1999)

## RESULTS

## PSYCHODINAE

## PERICOMINI

***Berdeniella magniseta* (Sarà, 1953) New to Switzerland**

The genus *Berdeniella* is specifically adapted to cold alpine streams and the Swiss fauna is likely to be considerably greater than currently recorded. Because of the specialised habitat and the strategy needed to collect specimens, this genus is under-recorded in many countries.

S: 1 ♂ 12-23.v.96; 1 ♂ 6-15.vi.96 (det. R. Wagner)

***Boreoclytocerus dali* (Eaton, 1893) New to Switzerland**

Closely related to *B. ocellaris*, and only distinguishable by details of the male terminalia. Records of this species are few for most of Europe and it is only known to occur with certainty in Great Britain, Slovenia and the Czech Republic.

S: 1 ♂, 23.iv-23.v.96

***Boreoclytocerus ocellaris* (Meigen, 1804)**

[As indicated by Chandler (1998) successive authors have erroneously quoted Meigen, 1818 for the five species described in *Trichoptera* in 1804.]

S: 1 ♂, 25.iv-11.v.96; 5 ♂ ♂, 12-23.v.96; 2 ♂ ♂, 24.v-5.vi.96; 1 ♂, 19.viii-14.viii.96

Recorded as *Clytocerus ocellaris* by Wagner (1998), on the basis of literature records only. This is the first record based on an authenticated specimen, for a species which should be widespread in Switzerland, as it has high larval tolerance of insanitary conditions.

***Pericoma (Pericoma) pseudoexquisita* Tonnoir, 1940**

A reasonably common species of *Pericoma* which, like the previous species, was included in the Swiss Checklist on the basis of literature records.

S: 15 ♂ ♂ 25.iv-23.v.96

***Pericoma (Pneumia) nubila* (Meigen, 1818)**

S: 1 ♂ 12-23.v.96

***Pericoma (Pneumia) palustris* (Meigen, 1804) New to Switzerland**

Despite being widely distributed throughout most of Europe, this species has surprisingly yet to be recorded from Switzerland.

S: 2 ♂ ♂ 12-23.v.96

***Pericoma (Ulomyia) cognata* Eaton, 1893**

S: 3 ♂ ♂ 25.iv-23.v.96

***Pericoma (Ulomyia) fuliginosa* (Meigen, 1804)**

S: 1 ♂ 6-19.vi.96

## PSYCHODINI

***Psychoda albipennis* Zetterstedt, 1850**

S: 1 ♂, 1 ♀, 12-23.v.96; 3 ♂ ♂, 4 ♀ ♀, 24.v-19.vi.96; 2 ♂ ♂, 20.vi-18.vii.96; 1 ♀, 19.vii-14.viii.96

V: 1 ♂, 14-20.v.79

R: 2 ♀ ♀, 10-12.v.82; 1 ♀, 20-24.v.82; 2 ♂ ♂, 28.vi-3.vii.82; 1 ♂, 26-31.x.82

*Psychoda brevicornis* Tonnoir, 1940

S: 1 ♂ 25.iv-11.v.96

*Psychoda buxtoni* Withers, 1988 **New to Switzerland**

Since its description in 1988 based on material from Great Britain, this species has only since been recorded from the Czech Republic. The species is associated with higher fungi, original specimens having been reared from an unnamed *Boletus*.

S: 1 ♂ 1 ♀ 24.v-19.vi.96

*Psychoda cinerea* Banks, 1894

S: 1 ♂, 2 ♀ ♀, 25.iv-23.v.96; 1 ♂, 20.vi-18.vii.96

*Psychoda crassipenis* Tonnoir, 1940

S: 1 ♀, 25.iv-11.v.96; 2 ♀ ♀, 24.v-19.vi.96; 1 ♀, 20.vi-18.vii.96

*Psychoda erminea* Eaton, 1898

S: 1 ♀, 24.v-19.vi.96; 1 ♂, 5 ♀ ♀ 20.vi-18.vii.96; 8 ♀ ♀, 19.vii-14.viii.96

R: 1 ♀, 4-6.x.82

*Psychoda gemina* (Eaton, 1904)

S: 3 ♂ ♂, 12-23.v.96; 5 ♂ ♂, 1 ♀, 24.v-19.vi.96; 7 ♂ ♂, 20.vi-18.vii.96; 15 ♂ ♂, 19.vii-14.viii.96

R: 1 ♂, 28.vi-3.vii.82; 1 ♀, 19-22.viii.82

V: 1 ♂, 14-20.v.79

*Psychoda grisescens* Tonnoir, 1922

The first record for Switzerland based on studied specimens. Wagner (1998) cites literature records only.

S: 1 ♀, 25.iv-23.v.96; 1 ♂, 3 ♀ ♀, 24.v-19.vi.96; 2 ♀ ♀, 20.vi-18.vii.96

R: 1 ♂, 16-18.viii.82; 1 ♂, 26-31.x.82

*Psychoda lobata* Tonnoir, 1940

S: 2 ♂ ♂, 24.v-19.vi.96

R: 1 ♀, 6-8.ix.82; 1 ♀, 16-19.ix.82; 1 ♂, 23-26.ix.82; 1 ♂, 27-29.ix.82; 1 ♂, 12-20.x.82

*Psychoda minuta* Banks, 1894

S: 1 ♀, 25.iv-11.v.96; 3 ♀ ♀, 24.v-19.vi.96; 3 ♂ ♂, 14 ♀ ♀, 20.vi-18.vii.96; 51 ♂ ♂, 6 ♀ ♀, 19.vii-14.viii.96

V: 1 ♀, 16-22.vii.79

*Psychoda mycophila* Vaillant, 1988 **New to Switzerland**

Another species associated with fungi, usually in decomposition. Originally described from French material reared from *Hypholoma capnoides*, *Lactarius vellereus* and *Craterellus cornucopioides*. It is clear from comparison of the descriptions and figures that this is the same species as *Psychomora vanharai* Jezek, 1995, recorded from the Czech Republic. I therefore formally declare this synonymy (**syn. nov.**).

S: 1 ♂ 6-19.vi.96

***Psychoda phalaenoides* (Linnaeus, 1758)**

S: 4 ♀ ♀, 25.iv-11.v.96; 2 ♂ ♂, 12-23.v.96; 2 ♂ ♂, 3 ♀ ♀, 24.v-19.vi.96  
 R: 1 ♀, 7-9.v.82; 1 ♂, 1 ♀, 26-31.x.82; 1 ♀, 3-8.xi.82

***Psychoda setigera* Tonnoir, 1922 New to Switzerland**

S: 1 ♂ 19.vii-14.viii.96

***Psychoda trinodulosa* Tonnoir, 1922**

S: 1 ♂, 12-23.v.96; 3 ♂ ♂, 1 ♀, 24.v-19.vi.96  
 R: 1 ♂ 4-11.vii.82

## TELMATOSCOPIINI

***Clogmia albipunctata* (Williston, 1893) New to Switzerland**

This species has a circumtropical distribution, having been carried by man to many countries. It is a species where larvae develop in small "container habitats", often using surprisingly small temporary containers, and is tolerant of quite insanitary conditions. It is assumed to be present in most European countries, although there are many countries for which no formal record exists.

V: 1 ♂ 23-29.vii.79 (det. J. Jezek)

***Feuerborniella obscura* (Tonnoir, 1919)**

S: 7 ♀ ♀, 25.iv-23.v.96; 12 ♂ ♂, 3 ♀ ♀, 24.v-19.vi.96; 2 ♂ ♂, 7 ♀ ♀, 20.vi-18.vii.96; 1 ♂, 1 ♀, 19.vii-14.viii.96

***Mormia eatoni* (Tonnoir, 1940)**

S: 5 ♂ ♂, 24.v-19.vi.96; 4 ♂ ♂, 20.vi-18.vii.96, 1 ♂, 19.vii-14.viii.96  
 V: 1 ♂, 11-17.vi.79

***Mormia nigripennis* Krek, 1971**

Jezek (1984a) has stated that this species is a synonym of *andrenipes* (Strobl). However, in a paper published the same year (Jezek, 1984b) which subdivides the genus *Mormia* into a number of smaller genera, this synonymy is not mentioned. It is furthermore apparent that the type of *nigripennis* has not been examined in establishing this supposed synonymy. The differences in morphology between the two species, as detailed by Vaillant (1971), are clear. Until this matter is resolved by evaluation of the type material, it seems prudent to consider *M. nigripennis* as a good species.

S: 1 ♂ 6-19.vi.96

***Philosepedon humeralis* (Meigen, 1818)**

Species of the genus *Philosepedon* are often difficult to determine and it is known that other European species remain to be described. For this reason the Swiss Checklist has this species with "?" (Wagner, 1998). This is therefore the first definite determination of a species which should be common in localities with dead snails, on which the larvae feed.

S: 1 ♂ 25.iv-11.v.96; 1 ♂ 12-23.v.96; 1 ♂ 24.v-5.vi.96

***Telmatoscopus vaillanti* Withers, 1986 New to Switzerland**

V: 1 ♂ 11-17.vi.79

***Threticus balkaneolpinus* Krek, 1971 New to Switzerland**

S: 1 ♂ 24.v-19.vi.96; 1 ♂ 19.vii-14.viii.96

***Trichopsychoda hirtella* (Tonnoir, 1919)**

The first record for Switzerland based on studied specimens. Wagner (1998) cites literature records only.

V: 1 ♂, 18-24.vi.79; 2 ♂ ♂, 25.vi-1.vii.79; 1 ♂, 16-22.vii.79

**SYCORACINAE*****Sycorax feuerborni* Jung, 1954**

S: 1 ♂ 24.v-5.vi.96

***Sycorax silacea* Haliday in Curtis, 1839**

S: 18 ♂ ♂ 24.v-19.vi.96

***Sycorax similis* (Müller, 1927)**

S: 2 ♂ ♂, 25.iv-23.v.96; 7 ♂ ♂, 12-23.v.96; 54 ♂ ♂, 24.v-19.vi.96; 6 ♂ ♂, 20.vi-18.vii.96; 1 ♂, 19.vii-14.viii.96

***Sycorax tonnoiri* Jung, 1954 New to Switzerland**

The small size of members of the genus *Sycorax* and their un-psychodid like appearance often leads to under-recording. There also seems to be an imbalance in sex ratios of trapped material, with many more females than males being captured. (The 75 females collected from Sihlwald cannot be attributed to species).

This species is thus far known from Slovenia, Czech Republic, Germany, former Yugoslavia and Denmark.

S: 2 ♂ ♂ 20.vi-18.vii.96

**TRICHOMYIINAE*****Trichomyia urbica* Haliday in Curtis, 1839 New to Switzerland**

Although widespread in Europe, this species is rarely encountered in any numbers. This is certainly because of its close association with tree rot-holes, a resource frequently overlooked by collectors, but with a very specialised fauna found in no other habitat. Further work with this type of habitat may reveal other species in Switzerland of this elusive genus.

S: 1 ♂ 20.vi-18.vii.96

**DISCUSSION**

The systems of trapping employed at Sihlwald were designed to give information principally about the xylophagous fauna (Schiegg, 2001). In the case of the psychodids, only one specimen of one species known to be an associate of tree rot-holes was captured (*Trichomyia urbica*). Four species of *Sycorax* are represented, which is exceptional for one locality. This is a genus often associated with fen vegetation in calcareous areas, in particular where tufa deposits occur around *Carex* tussocks. *Psychoda* is probably the most "terrestrial" of psychodid genera, with several species associated with higher fungi or herbivore dung. *Berdeniella* is the genus most typically found in fast-flowing alpine streams – its presence in the Sihlwald is unusual.

The use of luminous Malaise traps, as employed at Vezia and Rochefort has enabled a number of species to be recorded which are rarely taken by more classical methods. Further work of this kind could assist in assessing which species are more active at night, something which is currently only poorly understood.

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